Oct. 24, 1933. R. G. MOORE 1,931,850

HOOD CATCH

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Fig. 1

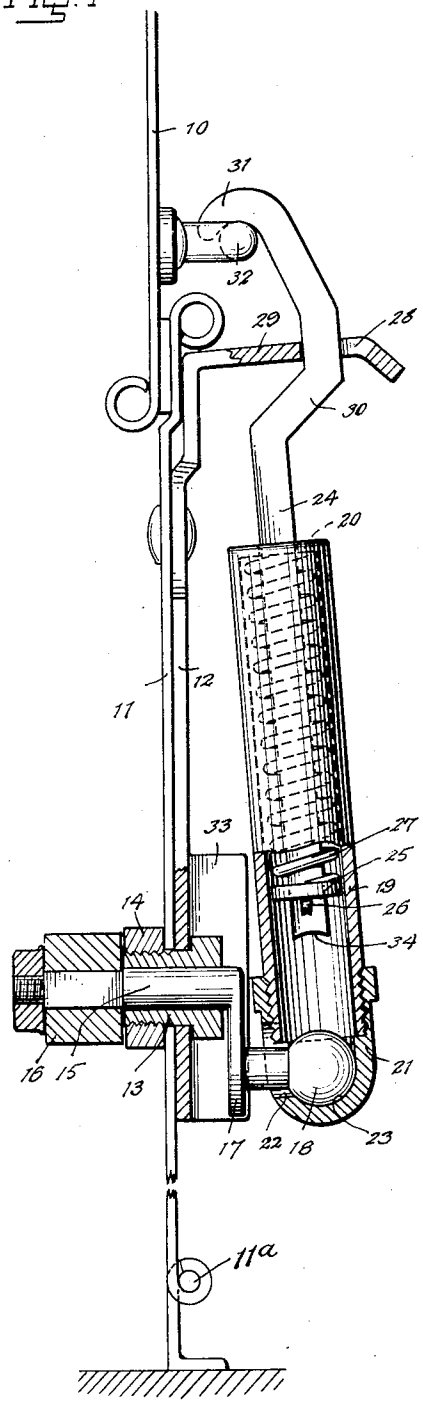
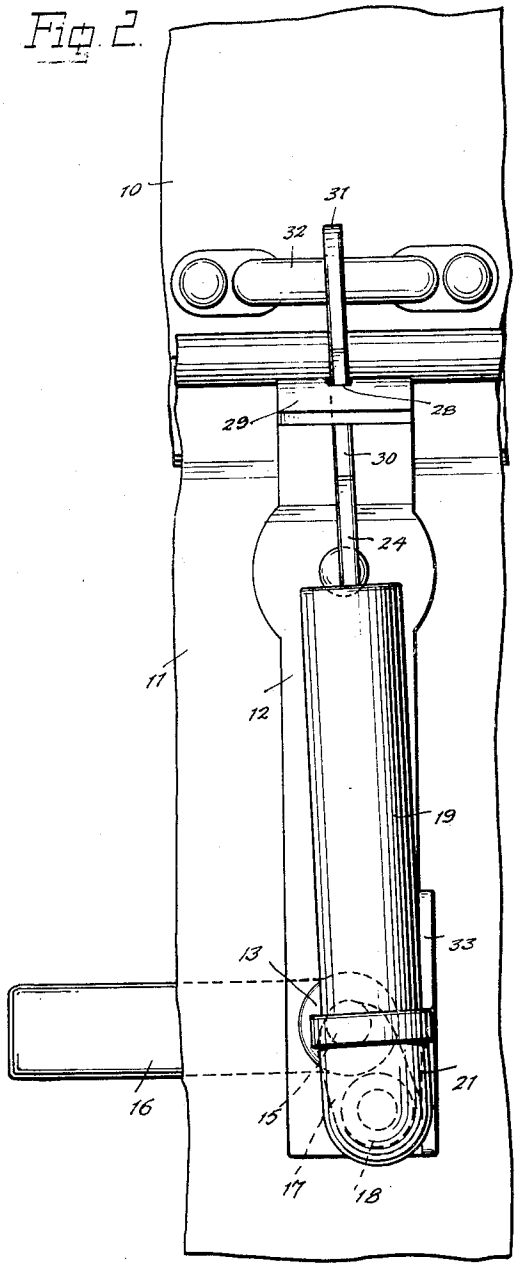


Fig. 2



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Fig. 3

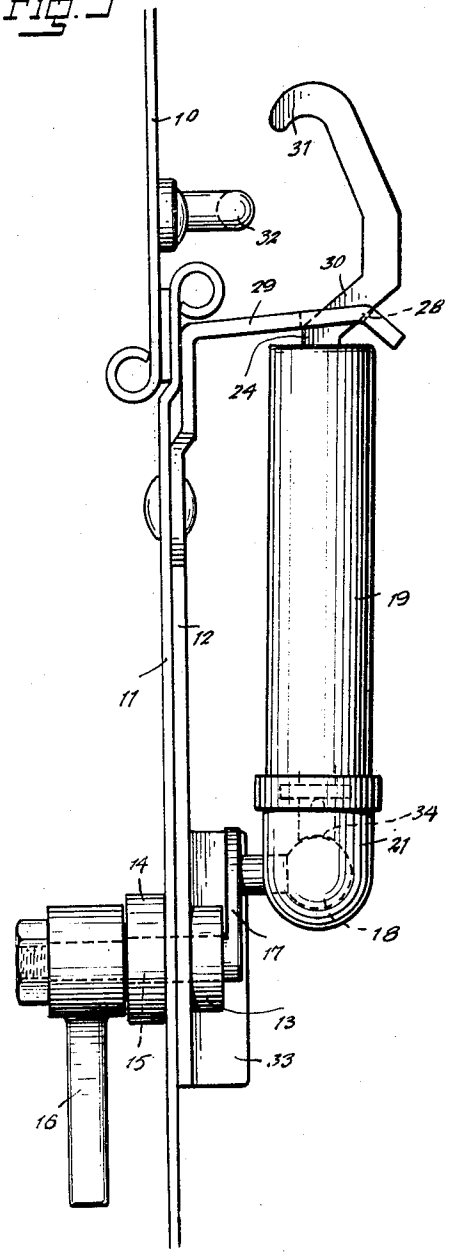
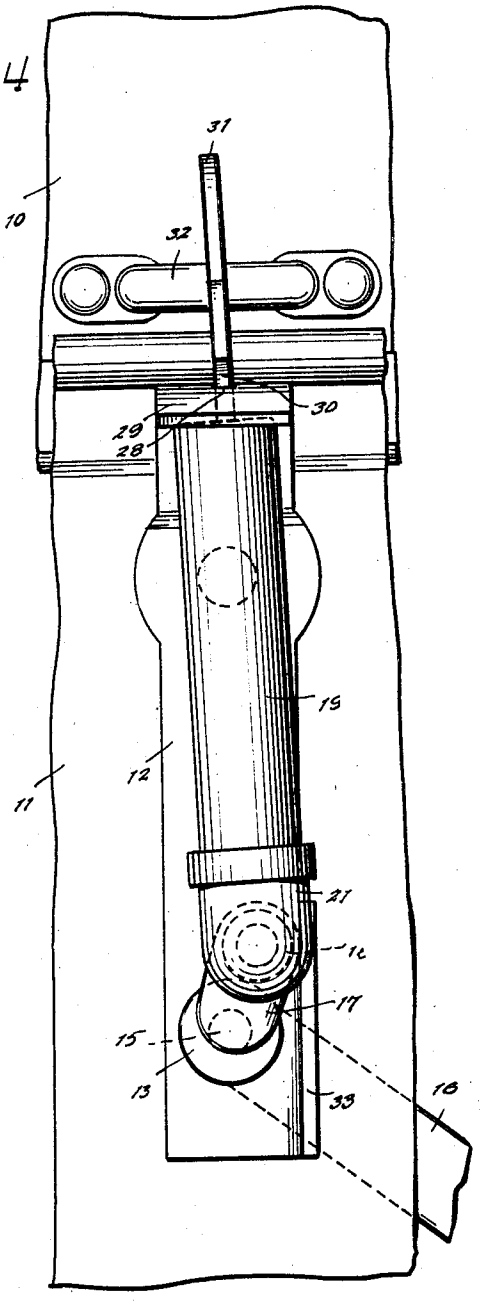


Fig. 4



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1,931,850

HOOD CATCH

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Application April 30, 1929. Serial No. 359,355

2 Claims. (Cl. 292—113)

The present invention relates to improvements in hood catches, particularly of the type having concealed latching means interiorly of the hood, and an exteriorly positioned operating handle or crank. An object of the invention is to provide a catch of this character having toggle means adapted to be operated to connect and disconnect the catch without the necessity for manually positioning or engaging the cooperating parts of the catch, and further to provide an operating handle which may be operated to connect or disconnect the catch, merely by turning the same in one or the other direction. Another object is to provide a catch which will be held against rattling and looseness in both the connected and unconnected relation. Another object is to provide a catch which will adjust itself to variations in the fit and dimensions of the hood structure, and which will compensate for the warping and weaving movements of the hood structure set up through movement and vibration of the vehicle.

A still further object is to provide a catch which will when disengaged automatically position itself in non-interfering relation to the hood, so that the latter may be raised vertically without the necessity of manually positioning the catch.

With the above and other objects in view an embodiment of the invention is shown in the accompanying drawings, and this embodiment will be hereinafter more fully described with reference thereto, and the invention will be finally pointed out in the claims.

In the drawings:

Fig. 1 is a side elevation of a hood catch according to the present embodiment of the invention, partly in section, and showing the same in the connected or operative position.

Fig. 2 is a front elevation from the interior of the hood.

Fig. 3 is a side elevation, and showing the catch in unconnected relation.

Fig. 4 is a view similar to Fig. 2, and showing the unconnected relation.

Similar reference characters indicate corresponding parts throughout the several figures of the drawings.

Referring to the drawings, the invention is particularly adapted for use with hoods in which each side of the same comprises an upper cover flap 10, suitably mounted over the engine, and a lower side closure flap 11, having its upper edge overlapped and abutting the lower edge of the flap 10. The flap 11 is hinged, as at 119, Fig. 1, or otherwise suitably mounted at its lower edge.

In the present illustrated embodiment the hood catch barrel and operating means is mounted on the lower flap 11, while the keeper bracket is mounted on the upper flap. It will be understood, of course, that the catch is adapted to other suitable and obvious arrangements.

Upon the inner side of the flap 11 there is secured a plate 12, provided near its lower edge with a flanged bearing 13, having a threaded crank bearing portion extending to the outer side of the hood through apertures in the plate and hood, and upon which a nut 14 is screwed at the outer side of the hood to secure the bearing in place. A crank shaft 15 is engaged in the bearing 13, and is provided at its outer end with an operating handle 16, a crank arm 17 being formed at its inner end, and having an inwardly extending ball-ended extension 18 formed at its lower end, which has a universal connection with the lower end of the hood catch barrel, as will presently more fully appear.

The cylindrical barrel 19 is flanged inwardly at its upper end as at 20, and at its lower end is secured in a drilled interiorly threaded cap 21, this cap also having a laterally extending passage 22, through which the portion 18 of the crank arm is extended, and a socket 23 in which the ball-end is engaged. The passage 22 is of such diameter as to permit insertion of the ball end 18, the lower end of the barrel, which is thereupon screwed into the socket extending across this passage and retaining the ball end in place.

The spring actuated plunger rod 24 is preferably of flattened cross-section, and extends through a correspondingly shaped aperture in the upper flanged end of the barrel, being provided within the barrel with a washer 25, secured by pinching the rod, as at 26, a spring 27 being engaged about the plunger between the washer and the upper end of the barrel.

The upper portion of the plunger loosely extends through an aperture 28 provided in an inwardly bent flange portion 29 of the plate 12, which serves to retain the catch and at the same time permit of its sliding and pivotal movements. The plunger rod is angularly bent, as at 30, to form a camming portion for bringing the upper hooked end 31 into and out of relation with the keeper bracket 32, secured to the upper flap 10, the hook end being entirely clear of the keeper in the disengaged relation so that the upper flap may be lifted vertically without interference with

the hook end. One end of the aperture 28 is at an angle to accommodate the camming portion 30, and for this purpose the end of the flange 29 is bent downwardly, thus bringing the end of the slot 28 into angular relation. The keeper bracket is preferably in the form of a U having its transverse portion bent away from the hood surface, the transverse portion being also relatively long to permit of some latitude in the engagement of the hook end of the plunger therewith.

At one side of the plate 12 there is formed a stop flange 33, disposed in the path of the crank arm at one side of the vertical line thereof, and serves to retain the parts in operative position, and as will be more particularly pointed out in the following description of the operation.

The operation is as follows:—

With the parts in their normal operative position, as shown in Figs. 1 and 2, the force of the spring 27 exerts a downward pull upon the upper flap 10 through the hooked engagement therewith of the plunger rod, upon which a downward pull is exerted by the spring, the spring also exerting an upward pull upon the barrel and crank arm, which latter is engaged with the stop flange 33 in a position at one side of the vertical line, so that the hood flaps are firmly held in closed position.

In order to disengage the catch, the handle is turned to move the crank arm downwardly away from the stop lug to a point at the other side of the vertical line, whereupon the spring pulls the barrel and crank upwardly to the point where the lower end of the plunger rod frictionally abuts against the ball end of the crank. In this relation the hook end of the plunger rod is swung upwardly and inwardly by the camming portion so that it is disengaged from the keeper bracket, permitting vertical separating movement of the flap 10 and outward swinging movement of the flap 10. In this position, the crank rests against the flange 33, as shown in Figs. 3 and 4, being held by the friction exerted by the plunger upon the ball-end under pressure of the spring, the lower end of the plunger being preferably curved, as at 34, to have snug surface engagement with the ball end.

The catch is engaged by first positioning the hood flaps in their closed relation with the keeper bracket beneath the hook end, and thereupon swinging the crank arm downwardly and past the vertical line, whereupon the upward force of the spring forces it against the stop lug.

The barrel and plunger are arranged at an inclined angle with respect to the flap 11, so that in addition to the downward pull upon the upper flap 10, the catch also exerts an inward pull, drawing the overlapping edges of the flaps snugly against each other to prevent looseness and rattling. The universal ball-joint connection of the crank with the lower end of the barrel permits of the change in the angle of the barrel which takes place as the crank is rotated to connect or disconnect the catch.

I have illustrated and described a preferred and satisfactory embodiment of the invention, but it will be obvious that changes may be made therein, within the spirit and scope thereof, as defined in the appended claims.

Having thus described my invention what I claim and desire to secure by Letters Patent is:—

1. In a hood catch, a latching member comprising spring actuated plunger means, toggle means connected thereto having a ball end, and keeper means adapted to be connected and disconnected with respect to said plunger means through actuation of said toggle means, said plunger means having a socket end adapted to have frictional engagement with said ball end of said toggle means under the pressure of its spring to resist relative movement between them in any position of disengagement from said keeper means.

2. In a hood catch, keeper means, latching means, actuating means comprising a crank adapted to swing in a plane parallel to the hood, a universal push and pull connection between said crank and one end of said latching means, whereby said end is adapted to be swung about the axis of rotation of said crank, means fixed to the hood for guiding the other end of said latching means whereby said guided end is reciprocated as said crank is rotated, means adapted through said reciprocatory movement to move said guided end transversely to the plane of rotation of said universally connected end and in a diagonal line toward and away from said keeper means, said keeper means adapted to be connected and disconnected with respect to said latching means through said reciprocatory movement and said transverse movement, said keeper means being vertically clear of the path of said latching means in said moved away position.

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